

## **Arguments/Remarks**

Claims 1-20 are pending in the application.

### **Response to Rejections under Section 112, second paragraph**

Claims 1-20 stand rejected under 35 U.S.C. § 112, second paragraph, as indefinite. Specifically, the Office asserts that "substantially" is a relative term that is allegedly not defined in specification. According to the Office, which cites to M.P.E.P. § 2173.05(b)(F), absent "a specific standard of measuring the degree intended," the "inclusion of the relative term renders the claim indefinite." (Office Action, page 2).

Regarding the use of the term "substantially," Applicant submits that, as set forth in M.P.E.P. § 2173.05(b)(D),

#### **D. "Substantially"**

[t]he term "substantially" is often used in conjunction with another term to describe a particular characteristic of the claimed invention. It is a broad term. *In re Nehrenberg*, 280 F.2d 161, 126 USPQ 383 (CCPA 1960). The court held that the limitation "to substantially increase the efficiency of the compound as a copper extractant" was definite in view of the general guidelines contained in the specification. *In re Mattison*, 509 F.2d 563, 184 USPQ 484 (CCPA 1975). The court held that the limitation "which produces substantially equal E and H plane illumination patterns" was definite because one of ordinary skill in the art would know what was meant by "substantially equal." *Andrew Corp. v. Gabriel Electronics*, 847 F.2d 819, 6 USPQ2d 2010 (Fed. Cir. 1988).

Accordingly, where the Office asserts that a specific standard for measuring the degree intended is required, the courts, to the contrary, have found the term "substantially" to be definite where "one of ordinary skill in the art would know what was meant" by the term, or to be definite in view of general guidelines contained within the specification. Applicant submits, therefore, that contrary to the Office's assertion, the absence of a "specific standard of measuring the degree intended" in the specification does not necessarily render the claim indefinite.

Applicant's claim 1 (and similarly claim 15) recites, in pertinent part, the step of "separating said acid layer from said solution leaving an acid-treated fatty acid-derived nitrile substantially free from said amide impurities." (emphasis added). Applicant submits that one of ordinary skill in the art would understand what the term "substantially free from said amide impurities" means. In addition, the specification provides general guidance as to the meaning of the term, such as through the nonlimiting example in which the amide wt% before treatment was 0.19, but after treatment was <0.02 (undetectable). Consequently, Applicant submits that the term "substantially" as used by Applicant is definite, and that the rejection of claims 1-20 should be withdrawn.

Furthermore, the Office asserts that it is unclear "what Applicant intends the structural metes and bounds of 'fatty acid-derived nitrile' to be." (emphasis in original)(Office Action, page 2). In the rejection, the Office provides a definition for the term "derivative" as "organic compounds obtained from another compound by the simple chemical process or an organic compound containing a structural radical similar to that from which it is derived (Hackh's chemical dictionary, 1972)." (Office Action, page 3).

Applicant respectfully disagrees that the term "fatty acid-derived nitrile" as used by Applicant is indefinite. It is basic chemistry that a "nitrile" is an organic compound having molecular structures in which a cyano group ( $-C \equiv N$ ) is attached to a carbon atom (C). Accordingly, the term "fatty acid-derived nitrile" is directed to a nitrile derived from a fatty acid. The specification itself states, "[f]atty nitriles, those derived from fatty acids . . . ." (Specification, page 1, line 7). Further, exemplary nitrile feedstocks of primary interest in the present invention can fall into one of three types, such as "coco-nitrile", "tallow-nitrile" and "oleo-nitrile". (See specification, page 4, lines 4-5). Accordingly, Applicant submits that the metes and bounds of the term "fatty acid-derived nitrile" is clear to one of ordinary skill in the art, both from the claim itself and further in view of the specification. Consequently, claims 1-20 are definite and the rejection should be withdrawn.

## Response to Rejections under Section 102(b)

Claims 1-7, 10-12 and 13-19 stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 4,575,434 ("Frank"). Applicant respectfully traverses the rejection and respectfully submits that the pending claims are patentable over Frank for at least the reasons set forth below.

The Office asserts that Frank teaches the process instantly claimed. Applicant respectfully disagrees. Frank discloses a process for the removal of long-chain aliphatic amides from a solution of amides and fatty acid-derived nitriles. In Frank, both a layered mineral comprising an aluminum silicate and an acid strong enough to protonate the amides is employed. The process of Frank operates by the adherence of the protonated amides to the surface of the layered mineral and the precipitation of a salt of the acid. (See description of second and third steps of Frank, at col. 3, lines 46-59). The precipitate layer and the layer mineral are then removed by filtration, such as by using one or more vacuum filter assemblies. (See Frank, col. 4, lines 56-60).

As recited in independent claims 1 and 15, Applicant's invention is directed to a process for the removal of long-chain aliphatic amide impurities from a solution of the amides and fatty acid-derived nitriles. The process comprises washing the solution with an amount of a strong acid effective to remove the amide as a salt in the acid layer. The process further includes separating the acid layer from the solution leaving an acid-treated fatty acid-derived nitrile substantially free from the amide impurities. As noted in Applicant's specification, in an embodiment of the invention, typically, after about 30 minutes of reacting a strong acid with the reaction mixture, the amide impurity is removed into the lower, dark acid layer, probably as salt. (Specification, page 5, lines 17-18). Separation of the acid layer from the solution can be accomplished by draining the thick, liquid amide salt layer from the upper purified nitrile layer or by decantation of the nitrile layer. (Specification, page 7, lines 21-24).

Contrary to the Office's assertions, Frank does not anticipate Applicant's invention, as recited in the pending claims. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described,

in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Here, the Office has rejected the pending claims as anticipated by Frank, in direct contradiction to the distinguishing features identified in the International Preliminary Examination Report issued on PCT application PCT/EP03/12834, for which the present application is a National Stage application. As set forth in the Report, "D2 [i.e. Frank] differs from the present application in that in the former [i.e. in Frank], no acid layer is formed and therefore, of course, an acid layer is not separated from said solution." (emphasis added) (International Preliminary Examination Report for International Application PCT/EP03/12834, Item V). For at least this reason identified by the International Preliminary Examining Authority in its Report (and for which novelty of the invention was found), Applicant's invention, as recited in independent claims 1 and 15, is distinguishable over Frank.

Consequently, because claims 1 and 15 include features neither disclosed nor suggested by Frank, claims 1 and 15 are patentable over Frank. Moreover, claims 2-14 and 16-20 are patentable over Frank for at least the reasons that claims 1 and 15, from which they respectively depend, are patentable, but may be separately patentable for additional reasons as well.

#### **Response to Rejections under § 103(a)**

Claims 8, 9 and 20 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Frank. Applicant submits that claims 8, 9 and 20 are patentable over the Frank for at least the reasons that claims 1 and 15, from which they respectively depend, are patentable, but may be separately patentable for additional reasons as well.

## Conclusion

In view of the arguments set forth above, Applicant respectfully submits that the currently pending application is in condition for allowance. Notice to this effect is earnestly solicited.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Ralph J. Mancini", enclosed within a hand-drawn oval.

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